

What I claim is:

1. A method of obtaining sequences which bind to the surface of a bacterial spore comprising the steps of:
 - (a) mixing phage from a Phage Display library with spores;
 - (b) incubating the product of step (a) for sufficient time to allow the phage to complex with the spores;
 - (c) centrifuging the product of step (b) to obtain the phage-spore complexes;
 - (d) washing the phage-spore complexes repeatedly;
 - (e) eluting the phage from the phage-spore complexes with elution buffer;
 - (f) neutralizing the eluate,
 - (g) amplifying the eluted phage,
 - (h) repeating the above steps to perform 3 to 4 rounds of biopanning;
 - (i) purifying individual clones;
 - (j) amplifying purified clones, then extracting genomic DNA from each preparation to determine the DNA sequence encoding peptides; and
 - (k) subjecting the peptides indicated by the DNA sequence to binding studies to determine ability of the peptides to bind to the target spores.
2. A peptide which binds to B. subtilis chosen from peptides of 5-12 amino acids containing the sequence Asn-His-Phe-Leu (Seq. ID No. 1).
3. A peptide of claim 2 containing the sequence Asn-His-Phe-Leu-Pro (Seq. ID No. 39).
4. A peptide which binds to B. anthracis chosen from peptides of the sequences Thr-Ser-Glu-Asn-Val-Arg-Thr (TSQNVRT) (Seq. ID No. 40) or a sequence of the general formula Thr-Tyr-Pro-X-Pro-X-Arg (TYPXPXR) wherein X is a Ile, Val or Leu.

5. A peptide of claim 4 having the sequence TSQNVRT.
6. A peptide of claim 4 having the general formula Thr-Tyr-Pro-X-Pro-X-Arg (TYPXPXR) wherein X is a Ile, Val or Leu.
7. A peptide of claim 6 wherein, in both instances, X is Ile.
8. A peptide of claim 6 wherein, in at least one instance, X is Val.
9. A peptide which binds to B. cereus chose from peptides having the sequence Val-Thr-Ser-Arg-Gly-Asn-Val (VTSRGNV) (Seq. ID No. 100) and Ser-Pro-Leu-X₁-X₂-His wherein X₁ is His or Arg and X₂ is Arg or Lys (SPLX₁X₂H).
10. A composition of matter comprising a peptide ligand which binds with specificity to the surface of a bacterial spore, said ligand being bound to a solid support.
11. A composition of claim 10 wherein the solid support is a polymeric support.
12. A composition of claim 10 wherein the solid support forms a filter.
13. A composition of claim 10 wherein the solid support is a tape or sponge.

add
a1

add
B1

add
D1

add
A3